Russell H. Fox
202 434 7483
rfox@mintz.com

701 Pennsylvania Avenue, NW
Suite 900
Washington, DC 20004
202 434 7300
mintz.com

April 11, 2019

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: ***Written Ex Parte Communication***

GN Docket No. 18-122, *Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band*

Dear Ms. Dortch:

T-Mobile USA, Inc. ("T-Mobile")[1/] has explained that an incentive auction remains the most efficient, market-based means of licensing terrestrial wireless operations in the 3.7-4.2 GHz band ("C-band").[2/] As a result of a C-band incentive auction, the authorizations of satellite and earth station operators may need to be modified to reflect the changed amount of C-band spectrum on which they are permitted to operate or the location of earth station operations. As explained below, the Commission has ample authority to make those changes. Satellite and earth station operators are authorized through licenses issued by the Commission under the Communications Act (the "Act"). The Communications Act, in turn, provides the Commission with broad authority to modify licenses if doing so would serve the public interest. In this case, the public interest requires reallocation of the C-band spectrum for terrestrial use and licensing that spectrum through an incentive auction.

The Commission Has Broad Authority to Modify Licenses Under Section 316 of the Act

The Commission May Modify Licenses in Order to Serve the Public Interest

Section 316 of the Act states that "[a]ny station license or construction permit may be modified by the Commission either for a limited time or for the duration of the term thereof, if in the

1/ T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

2/ *See* Letter from Steve B. Sharkey, Vice President, Government Affairs, Technology and Engineering Policy, T-Mobile USA, Inc., to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Feb. 15, 2019) ("T-Mobile Feb. 15 *Ex Parte* Letter") (describing the three simple steps necessary for a C-band incentive auction).

judgment of the Commission such action will promote the public interest, convenience, and necessity . . . ."[3/] In interpreting the Commission's authority under Section 316, the Commission and courts have recognized that the agency has broad authority to modify licenses; the D.C. Circuit has said that "Section 316 grants the Commission *broad power to modify licenses*; the Commission need only find that the proposed modification serves the public interest, convenience and necessity."[4/]

For instance, the Commission exercised its authority under Section 316 to modify the license of a satellite operator, Motient Services, Inc. ("Motient"), to relocate it from the upper L-band (1545-1559 MHz and 1646.5-1660.5 MHz) to unassigned spectrum in the upper L-band *and* lower L-band (1525-1530 MHz, 1530-1544 MHz, and 1626.5-1645.5 MHz).[5/] Pointing out that the D.C. Circuit had determined that the Commission has "significant latitude when it exercises its Section 316 authority,"[6/] the Commission explained that the modification was necessary because the U.S. had not been able to coordinate the upper L-band internationally for use by a U.S. licensee.[7/] Similarly, the Commission exercised its authority under Section 316 to assign Sprint new spectrum in the 1.9 GHz band in order to abate interference to public safety operations in the 800 MHz band, where Sprint had been operating.[8/]

Not only has the Commission used its Section 316 authority to modify licenses on an individual basis, but it has also exercised that authority to modify licenses on a service-wide basis. For example, the Commission exercised its Section 316 authority to modify broadcasters' licenses to include digital television ("DTV") facilities in order to facilitate the DTV transition.[9/] The Commission observed that such an approach would ease administrative burdens on the Commission and broadcasters alike by reducing the number of applications that would

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3/ 47 U.S.C. § 316(a)(1); *see also* Reply Comments of T-Mobile USA, Inc., GN Docket No. 18-122, *et al.*, at 8 (filed Dec. 11, 2018) ("T-Mobile Reply Comments").

4/ *California Metro Mobile Communications, Inc. v. FCC*, 365 F.3d 38, 45 (D.C. Cir. 2004) (*emphasis added*).

5/ *See Establishing Rules and Policies for the use of Spectrum for Mobile Satellite Services in the Upper and Lower L-band*, Report and Order, 17 FCC Rcd 2704, ¶¶ 1, 21 (2002) ("*2002 MSS Order*").

6/ *Id.* ¶ 25.

7/ *See id.* ¶ 21; *see also id.* ¶ 25 (finding in addition that the public interest would be served by the modification because it would allow Motient to provide services to areas that are too remote or sparsely populated to receive service from terrestrial communications systems).

8/ *See Improving Public Safety Communications in the 800 MHz Band et al.*, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, 19 FCC Rcd 14969, ¶ 68 (2004) ("*2004 800 MHz Order*") (explaining that the modification would serve the public interest because interference had impaired public safety operations in the 800 MHz band).

9/ *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Fifth Report and Order, 12 FCC Rcd 12809 (1997) ("*1997 DTV Order*").

eventually have to be filed for those facilities as a part of the transition.[10/] In upholding the Commission's decision, the D.C. Circuit reasoned that "nothing in the statute . . . suggests that the FCC's modification power is limited to individual licenses" and instead that "the FCC may modify entire classes of licenses."[11/]

The Commission recently determined that it may, under Section 316 of the Act, modify licenses and relocate licensees in the 39 GHz band who do not choose to participate in an incentive auction for new spectrum uses in that band.[12/] Pursuant to that decision, the Wireless Telecommunications Bureau, in cooperation with the Office of Economics and Analytics, has proposed procedures to reconfigure the 39 GHz band that would include the opportunity for 39 GHz band incumbents to choose either to relinquish their licenses in exchange for an incentive payment or receive modified licenses.[13/] As noted further below, this paradigm is similar to post-incentive auction modifications of incumbent licenses in the C-band.

While Section 316 of the Act and Section 1.87 of the Commission's rules implementing Section 316 provide licensees the opportunity to object to a proposed modification,[14/] both the Commission and courts have recognized that license modifications need not be consensual.[15/] To

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10/ *Id.* ¶ 57.

11/ *Community Television, Inc. v. FCC*, 216 F.3d 1133, 1140 (D.C. Cir. 2000).

12/ *See Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Fourth Further Notice of Proposed Rulemaking, 33 FCC Rcd 7674, ¶ 38 (2018) ("*39 GHz NPRM*") (reasoning that repacking non-participating incumbents will ensure that the Commission can minimize encumbrances in the band and maximize the amount of clean spectrum available for auction, while preserving existing usage rights for incumbents); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Fourth Report and Order, GN Docket No. 14-177, FCC 18-180, ¶ 15 (rel. Dec. 12, 2018) ("*39 GHz Order*") (adopting its proposal). In making this determination, the Commission analogized its authority under Section 316 with the separate authority it received to repack television broadcasters that chose not to participate in the Broadcast Incentive Auction. *See 39 GHz NPRM* ¶ 38. Accordingly, while Congress has from time-to-time provided the Commission with more explicit authority to modify authorizations, its authority under Section 316 alone remains broad and may be applied to a C-band incentive auction.

13/ *See Notice of Initial 39 GHz Reconfiguration Procedures, et al.*, Public Notice, GN Docket No. 14-177 and AU Docket No. 19-59, DA 19-196 (rel. Mar. 20, 2019).

14/ *See* 47 U.S.C. § 316(a)(1) ("No such order of modification shall become final until the holder of the license or permit shall have been notified in writing of the proposed action and the grounds and reasons therefor, and shall be given reasonable opportunity, of at least thirty days, to protest such proposed order of modification; except that, where safety of life or property is involved, the Commission may by order provide, for a shorter period of notice."); 47 C.F.R. § 1.87; *see also 2002 MSS Order* ¶ 25 ("We note in addition that Section 316, unlike Section 309 of the Act, provides for challenges to modifications only by existing licensees or permittees whose own authorizations would be modified by the Commission's action.").

15/ *See, e.g., Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems*, Eighth Report and Order, Fifth Notice of Proposed Rule Making and

the contrary, while recognizing that "licensees have a strong and legitimate interest in administrative repose," the D.C. Circuit has nonetheless held that "Congress gave the Commission the authority in section 316 to override that interest if doing so serves the public interest, convenience and necessity."[16/] Indeed, the D.C. Circuit has pointed out that "if modification of licenses were entirely dependent upon the wishes of existing licensees, a large part of the regulatory power of the Commission would be nullified."[17/]

The Commission Has Broad Discretion When Modifying Licenses Pursuant to Section 316

The Commission has recognized the interests of a licensee whose authorization is modified pursuant to Section 316 and sought to avoid causing substantial harm to that licensee. But in doing so, the Commission has acted only to equitably compensate the licensee – it has expressly provided that the licensee receiving a modified authorization need not receive the exact same rights as prior to the modification. For example, in relocating Sprint to the 1.9 GHz band from the 800 MHz band, the Commission concluded that "it is in the public interest to compensate [Sprint] for the surrendered spectrum rights . . . ."[18/] The Commission, however, rejected compensating Sprint on a "megahertz-for-megahertz" basis.[19/]

The Commission may also *reduce* a licensee's rights when exercising its Section 316 authority to modify licenses, including by reducing the amount of spectrum on which the licensee may operate. The Commission, for instance, in modifying Motient's L-band license, explained that it was reducing the amount of spectrum for which Motient was authorized from 28 megahertz to 20 megahertz.[20/] While recognizing that "Motient is operating the system it was authorized to construct and launch and cannot redesign its system while in operation,"[21/] the Commission nonetheless determined that Motient's system was capable of providing an economically viable service with as little as 20 megahertz. Similarly, the Commission upheld the Wireless Telecommunications Bureau's decision to modify a license by reducing the licensee's authorized effective radio power for its base stations.[22/] The Commission rejected the licensee's claim that

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Order, 20 FCC Rcd 15866, ¶ 19 (2005); *Peoples Broadcasting Co. v. United States*, 209 F.2d 286, 288 (D.C. Cir. 1953); *Rainbow Broadcasting v. FCC*, 949 F.2d 405, 410 (D.C. Cir. 1991) ("Congress broadened the FCC's discretion in § 316, which provides the FCC with the authority to modify licenses without the approval of their holders.").

16/ *California Metro Mobile Communications, Inc.*, 365 F.3d at 45.

17/ *Peoples Broadcasting Co.*, 209 F.2d at 288.

18/ *2004 800 MHz Order* ¶ 31.

19/ *See id.* ¶ 32.

20/ *See 2002 MSS Order* ¶ 19.

21/ *Id.*

22/ *See Pacific Gas and Electric Company et al.*, Memorandum Opinion and Order, 18 FCC Rcd 24409 (2003) ("*2003 PG&E Order*"); *Pacific Gas and Electric Company et al.*, Memorandum Opinion and Order on Reconsideration, 17 FCC Rcd 20900, ¶ 15 (2002); *Pacific Gas and Electric Company et al.*,

the modification would "substantially harm" its customers and determined that the licensee failed to show that the modification "would actually hamper its current operations."[23/]

Even in cases where the Commission determined that incumbents, as a matter of policy, should be provided with "comparable facilities," such as under the Commission's emerging technologies procedures,[24/] the Commission held that "comparable facilities" are defined in terms of throughput, reliability, and operating costs and that incumbents need not be provided with more than what they need at the time of relocation.[25/] The purpose behind providing incumbents with comparable facilities, like Section 316, is not to provide the incumbent with facilities that are perfect in every respect. The D.C. Circuit has agreed, holding that the Commission's objective is simply to ensure that incumbents will be able to continue operating.[26/]

The Commission Has Authority to Modify Satellite Operators' and Earth Stations' Authorizations as Necessary to Implement a C-Band Incentive Auction

Satellite Operators' and Earth Stations' Authorizations in the C-Band are Licenses Subject to Section 316 of the Communications Act [27/]

Licenses are issued by the Commission pursuant to Title III of the Communications Act.[28/] Section 153 of the Communications Act defines a "license" as an "instrument of authorization . . . for the use or operation of apparatus for transmission of energy, or communications, or signals by radio, *by whatever name the instrument may be designated by the Commission*."[29/] And the

Memorandum Opinion and Order, 17 FCC Rcd 98, ¶ 9 (2001) (finding that the modification would serve the public interest while "not unduly disrupting" the licensee's operations).

23/ *2003 PG&E Order* ¶ 16.

24/ *See Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, First Report and Order and Third Notice of Proposed Rulemaking, 7 FCC Rcd 6886, ¶ 24 (1992).

25/ *Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service*, Second Report and Order and Second Memorandum Opinion and Order, 15 FCC Rcd 12315, ¶¶ 91-92 (2000).

26/ *See Teledesic LLC v. FCC*, 275 F.3d 75, 85-76 (D.C. Cir. 2001).

27/ Attached, as Appendix A, is a discussion of the authorization processes for satellite operators and earth station registrants.

28/ *See Regulation of Domestic Receive-Only Satellite Earth Stations*, First Report and Order, 74 F.C.C.2d 205, ¶ 8 (1979) ("*1979 Deregulation Order*").

29/ 47 U.S.C. § 153(49) (*emphasis added*).

definition of "transmission of energy by radio" includes "both such transmission and all instrumentalities, facilities, and services incidental to such transmission."[30/]

As explained in Appendix A, satellite operators transmit signals to terrestrial earth stations. They receive authorizations by the Commission for those transmissions through the first-come, first-served process and obtain licenses for their operations. Therefore, satellite operators hold "licenses" subject to Title III of the Communications Act. Similarly, transmit-receive earth stations transmit signals to space stations and hold "licenses" for their operations, making them also subject to Title III of the Communications Act.

In addition, as T-Mobile has explained,[31/] authorizations for receive-only earth stations constitute "licenses" under Section 153 of the Act because they are incidental to satellite operators' transmissions. Even if earth station facilities were somehow not considered "incidental" to the radio transmissions they receive, receive-only earth station registrations authorize the operation or use of an apparatus for "communications." Thus, as authorizations for operations that are incidental to satellite operators' transmissions *or* as authorizations for the operation of an apparatus of communications, receive-only earth station registrations are "licenses" under the Act, regardless of the FCC's nomenclature.

T-Mobile has also previously demonstrated that Commission precedent supports this interpretation. *First*, T-Mobile explained that while the Commission eliminated mandatory licensing of receive-only earth stations in 1979, it did so in order to reduce regulatory burdens, not to change the statutory status of receive-only earth station authorizations as licenses.[32/] *Second*, the Commission's decision in 1991 to adopt a registration program in lieu of optional licensing procedures for domestic receive-only earth stations did not change that result. As T-Mobile pointed out, the Commission explained in its 1991 decision that "[t]he information required for an application for *registration* would be the same as is currently required for a *license* application but the program would eliminate the issuance of a formal license."[33/] *Third*, T-Mobile demonstrated that the Commission's rules themselves suggest that there is no material difference between earth station registrations and earth station licenses.[34/] *Finally*, T-Mobile explained that a statement by the Commission in 2015 suggesting that receive-only earth station

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30/ *Id*. § 153(57).

31/ *See* Letter from Russell H. Fox, Mintz, Counsel to T-Mobile, USA, Inc., to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 2 (filed Mar. 19, 2019) ("T-Mobile March 19 *Ex Parte* Letter").

32/ *See id.* at 3 (noting that the Commission determined that receive-only earth stations still had the *option* of being licensed in order to receive protection from interference).

33/ *See id.* at 3-4 (*emphasis added*) (citing *Amendment of Part 25 of the Commission's Rules and Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacings and to Revise Application Processing Procedures for Satellite Communications Services*, First Report and Order, 6 FCC Rcd 2806, ¶ 4 (1991) ("*1991 Streamlining Order*")).

34/ *See* T-Mobile March 19 *Ex Parte* Letter at 4.

registrations "are neither construction permits nor station licenses" was limited to the agency's consideration of *pro forma* assignments and transfers of control – the Commission took no action to reverse its determination that Title III policies and procedures apply to receive-only earth station registrations.[35/]

Modifying Satellite Operators' and Earth Stations' Authorizations Would Serve the Public Interest

The Commission can and should exercise its broad discretion under Section 316 of the Act to modify, to the extent necessary, the authorizations of satellite operators and earth stations in the C-band to ensure the successful implementation of a C-band incentive auction.

Similar to the Commission's past decisions, the Commission's use of its Section 316 authority to modify licenses after a C-band incentive auction would produce a result that serves the public interest. As T-Mobile has explained, a C-band incentive auction would serve the public interest because, unlike the C-Band Alliance's proposal, it would provide an open and transparent process to allow the market to decide the maximum efficient amount of spectrum that should be reallocated for mobile broadband deployment.[36/] It would account for the differential value of the spectrum in terrestrial and satellite use in different areas by making spectrum available on a market-by-market basis, and it could provide the incentives and means to make up to 500 megahertz of spectrum available in a market. Moreover, an incentive auction of the C-band would comply with the Communications Act, allow participation by all stakeholders, and benefit U.S. taxpayers by returning a portion of the proceeds to the U.S. Treasury. Modifying satellite operators' and earth stations' authorizations would be a part of that process.

While some parties have attempted to argue that satellite operators and earth stations have "paid" for use of the C-band because they have made significant investments in the spectrum,[37/] those arguments are misleading and are no different from any other licensee to which Section 316 may apply. Modifying satellite operators' and earth stations' authorizations as necessary under a C-band incentive auction would preserve the character of the services they offer or receive. In contrast, satellite operators (and earth station registrants) are not entitled to use their authorizations to provide the terrestrial services that the Commission would authorize through an

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35/ *See id*. at 4-5 (citing *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Second Report and Order, 30 FCC Rcd 14713, ¶ 306 (2015) ("*2015 Satellite Licensing Order*")).

36/ *See* T-Mobile Feb. 15 *Ex Parte* Letter at 2.

37/ *See, e.g.*, Reply Comments of the C-Band Alliance, GN Docket No. 18-122, *et al.*, at 25 (filed Nov. 28, 2018); *id.* at Attachment 2 at 18 (claiming that "the C-Band licensees have invested billions of dollars in launching and maintaining their satellite fleets, fulfilling the regulatory bargain inherent in the issuance of their licenses"); Letter from Scott Blake Harris and V. Shiva Goel, Harris, Wiltshire & Grannis, LLP, Counsel to the Small Satellite Operators, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, at 5 (filed Mar. 25, 2019) ("[E]arth station operators, like satellite operators, have made substantial investments in reliance on their FCC authorizations . . . .").

incentive auction. As T-Mobile has explained, satellite operators in the C-band are authorized to provide satellite services only – not terrestrial services.[38/]

Potential Outcomes of Applying of Section 316 Authority to C-Band Satellite Operators and Earth Stations

As demonstrated above, the Commission has ample authority to modify satellite operators' and earth stations' authorizations. Below we describe the potential application of Section 316 authority that might be necessary.

Satellite Operators

The Commission may not need to exercise its authority under Section 316 with respect to authorizations held by satellite operators, regardless of the outcome of an incentive auction. Because the future ability of terrestrial licensees to use the C-band will be driven by the need to protect earth station operations (and not space-to-earth transmissions), satellite operators may continue to transmit using all 500 megahertz of that spectrum and serve earth stations in locations where they will continue to exist. In the event that the incentive auction results in satellite operators agreeing to relinquish some of the 500 megahertz across the country, the Commission *may* wish to modify the satellite operators' licenses. In that case, the modifications would be based on the *voluntary* requests of the satellite operators. However, the Commission may be required to exercise its authority under Section 316 to modify satellite operators' licenses to address any "holdout" satellite operators or it may simply wish to modify the licenses of satellite operators to reflect that the full 500 megahertz is no longer required to provide service.

Earth Station Operators

The Commission may be required to exercise its authority under Section 316 to modify earth station authorizations. Like its proposed processes governing the 39 GHz incentive auction, the Commission could provide earth station operators an opportunity to relinquish their authorizations for an incentive payment, based on a MHz-pop value, or opt to remain in the band and receive modified authorizations. For those that opt to remain in the band, the Commission would exercise its Section 316 authority to modify the earth station authorizations. Those modifications might, for example, reduce the amount of spectrum in which an earth station operator could claim the right to interference protection from 500 megahertz to the actual occupied bandwidth of the transmissions they receive at any one time or some other value less than the full 500 megahertz. A modification could also identify a new geographic area in which an earth station operator would receive interference protection. Like the procedures proposed for reconfiguring the 39 GHz band, the key decision for earth station operators would be to either relinquish authorizations in exchange for an incentive payment or elect to receive modified licenses.

38/ *See* T-Mobile Reply Comments at 23 n.77.

As a practical matter, earth station operators will continue to have "comparable facilities" if their authorizations are modified, consistent with Commission precedent. Earth stations are generally authorized to receive on all 500 megahertz of C-band spectrum, even though they use only a fraction of the available bandwidth. Thus, there would be no material impact on their operations from a reduction in the amount of spectrum in which they could claim interference protection rights. In addition, as T-Mobile previously explained, earth station operators could be compensated for any relocation costs either through receiving the purchase price directly and clearing the band or through satellite operators, who would receive the purchase price and be responsible for clearing the band.[39/]

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Pursuant to Section 1.1206(b)(2) of the Commission's rules, an electronic copy of this letter is being filed in the above-referenced docket. Please direct any questions regarding this filing to the undersigned.

Respectfully submitted,

/s/ Russell H. Fox

Russell H. Fox

Counsel to T-Mobile, USA, Inc.

[39/] *See* T-Mobile Feb. 15 *Ex Parte* Letter at 3; *see also id.* at 8 ("In a C-band incentive auction, winning satellite operators would be responsible for accommodating remaining earth station registrants, including potentially by relocating those operations to remote areas, as T-Mobile has suggested, using fiber.").

Appendix A

Satellite Operator Licensing Process

Satellite operators in the C-band are licensed to provide satellite services using that spectrum pursuant to Part 25 of the Commission's rules.[40/] Satellite operators use this band to provide downlink signals of various bandwidths to licensed transmit-receive, registered receive-only, and unregistered receive-only earth stations throughout the United States.[41/] Currently, there are four companies representing virtually all of the operational continental United States C-band services: Intelsat, SES, Eutelsat, and Telesat.[42/]

Prior to April 23, 2003, the Commission issued satellite licenses in "processing rounds," a procedure by which it would combine into groups and process together applications to operate satellites in a particular frequency band.[43/] If there were enough orbital locations and/or sufficient spectrum available to accommodate all the qualified applicants, the Commission would issue licenses to all applicants because it viewed orbital locations as generally fungible.[44/] If there were not enough orbital locations and/or sufficient spectrum, applicants would be given an opportunity to negotiate "mutually agreeable" compromises.[45/] On occasion, if applicants were unable to reach a mutually agreeable compromise, the Commission would mandate a solution using information available on the progress of the negotiations between the parties. Nevertheless, applicants and the Commission would work together "so that all the applications could be granted."[46/]

On April 23, 2003, the Commission adopted an Order revising its satellite licensing rules, eliminating the fungibility policy and granting authorizations for space stations on a first-come, first-served basis at a particular orbital slot.[47/] Under this approach, the Commission places

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40/ 47 C.F.R. Part 25.

41/ *See Expanding Flexible Use of the 3.7 to 4.2 GHz Band, et al.*, Order and Notice of Proposed Rulemaking, 33 FCC Rcd 6915, ¶ 10 (2018) ("*NPRM*").

42/ *See* Comments of the C-Band Alliance, GN Docket No. 18-122, *et al.*, at 4 (filed Oct. 29, 2018).

43/ *See Amendment of the Commission's Space Station Licensing Rules and Policies, et al.*, Notice of Proposed Rulemaking and First Report and Order, 17 FCC Rcd 3847, ¶ 5 (2002) ("*2002 Satellite Licensing NPRM*"); *Amendment of the Commission's Space Station Licensing Rules and Policies; Mitigation of Orbital Debris*, First Report and Order and Further Notice of Proposed Rulemaking *et al.*, 18 FCC Rcd 10760, ¶¶ 8-10 (2003) ("*2003 Satellite Licensing Order*").

44/ *See 2002 Satellite Licensing NPRM* ¶¶ 10, 79.

45/ *See id.* ¶ 10.

46/ *Id*.

47/ *See* 47 C.F.R. § 25.114; *2003 Satellite Licensing Order* ¶¶ 5, 158 (adopting a first-come, first-served approach for geostationary satellite orbit ("GSO")-like systems and a modified approach for non-geostationary satellite orbit ("NGSO")-like systems); *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd 6373, ¶ 14 (2017) ("*Mid-Band NOI*") (explaining that the C-band is utilized by GSO Fixed Satellite Service ("FSS") satellites); *NPRM* ¶¶ 9-10.

applications for new satellites at new orbital locations and market access requests for non U.S.-licensed satellites at new orbital locations in a "queue" and considers them in the order in which they are filed.[48/] Once licensed, space station operators in the C-band are authorized for all 500 megahertz of the spectrum "exclusively at any orbital slot, but non-exclusively in terms of geographic coverage."[49/] Therefore, multiple space stations in the C-band transmit in overlapping geographic boundaries.[50/] The Commission has continued to streamline its satellite licensing procedures since 2003,[51/] but its first-come, first-served process remains in place today.

Earth Station Registration Process

Similar to satellite operators, earth stations are governed by Part 25 of the Commission's rules.[52/] An earth station may be any one of the following: (i) a *licensed* transmit-receive earth station; (ii) a *licensed or registered* receive-only earth station; or (iii) an *unregistered* receive-only earth station. Prior to November 7, 1979, the Commission's authorization procedures required both transmit-receive and receive-only earth stations to obtain licenses.[53/] Pursuant to that process, an earth station had to successfully complete a frequency coordination procedure and file an application for either a simultaneous construction permit and license or separate applications for a construction permit and license.[54/] On November 7, 1979, the Commission released its *1979 Deregulation Order*, eliminating "mandatory licensing" of domestic receive-only earth stations.[55/] Under that deregulatory scheme, receive-only earth station operators had the option of licensing their facilities in order to gain full interference protection *or* operating their receive-only terminals without a license and thereby receiving no interference protection.[56/]

On May 21, 1991, the Commission adopted its *1991 Streamlining Order*, changing its "optional licensing" procedures into a "registration program" for domestic receive-only earth stations.[57/] Consequently, under the Commission's current rules, receive-only earth stations that operate with U.S.-licensed space stations, or with non-U.S.-licensed space stations that have been duly

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48/ *See* 47 C.F.R. §§ 25.158(b), 25.137(c). In cases where two or more applicants file mutually exclusive applications at the same thousandth of a second for the same orbital location, the Commission will divide the spectrum evenly among the applicants. *See 2003 Satellite Licensing Order* ¶ 135.

49/ *NPRM* ¶ 10; *see also* 47 C.F.R. § 25.140.

50/ *See NPRM* ¶ 10.

51/ *See, e.g., 2015 Satellite Licensing Order*.

52/ *See* 47 C.F.R. Part 25.

53/ *See* T-Mobile March 19 *Ex Parte* Letter at 3-5; *Regulation of Domestic Receive-Only Satellite Earth Stations*, Notice of Inquiry, 70 F.C.C.2d 1460, ¶ 3 (1979) ("*1979 Deregulation NOI*").

54/ *See 1979 Deregulation NOI* ¶ 3.

55/ *See 1979 Deregulation Order*; *see also Transborder Satellite Video Services et al.*, Memorandum Opinion, Order and Authorization, 8 F.C.C.2d 258, ¶ 44 (1981) ("*1981 Transborder Order*").

56/ *See 1979 Deregulation Order* ¶ 34; *1981 Transborder Order* ¶ 44.

57/ *See 1991 Streamlining Order* ¶ 7.

approved for U.S. market access, *may* be registered with the Commission.[58/] On the other hand, receive-only earth stations operating with non-U.S.-licensed space stations that have *not* been duly approved for U.S. market access *must*, like transmit-receive earth stations, obtain a license.[59/] Earth stations that have obtained licenses or registrations are entitled to certain interference protections.[60/] Unregistered receive-only earth stations, however, receive *no* protections.[61/]

58/ *See* 47 C.F.R. § 25.131(b).

59/ *See id*. § 25.131(j).

60/ *See Mid-Band NOI* ¶ 14 n.19 (stating that registered receive-only earth stations are protected from interference from terrestrial microwave stations in bands shared coequally with the Fixed Service in accordance with the procedures of Sections 25.203 and 25.251 of the Commission's rules, subject to the stricture in Section 25.209(c)); *see also* 47 C.F.R. §§ 25.203, 25.251, 25.209(c).

61/ *See Mid-Band NOI* ¶ 14 n.19.